

WHAT IS CLAIMED IS:

1. An apparatus for manufacturing mats, comprising
 - a main base having front and rear parts, and first and second support
 - 5 elements between the front and the rear parts thereof; the front and the rear parts respectively having front and rear material containers disposed thereon;
 - a first main roller turnably arranged on the front part of the main base; the first main roller having recess patterns on an outer side, and having
 - 10 heating tubes and water supplying pipes disposed therein;
 - a second main roller turnably arranged on the rear part of the main base; the second main roller having recess patterns on an outer side, and having heating tubes and water supplying pipes disposed therein;
 - a leather supplying mechanism for feeding leathers to the first and the
 - 15 second main rollers; the leather supplying mechanism being supported by the first and the second support elements; the leather supplying mechanism having first pressing roller, which is in contact with the first main roller for guiding a leather between it and the first main roller with one side of the leather opposing the first main roller; the
 - 20 leather supplying mechanism having a second pressing roller, which is in contact with the second main roller for guiding the leather between it and the second main roller with other side of the leather opposing the second main roller; the leather supplying mechanism having

subsidiary rollers for guiding leathers to the first and the second pressing rollers respectively;

front and rear material applying rollers respectively dipped in liquid materials in the front and the rear material containers, and respectively
5 in contact with the first and the second main rollers for applying the liquid materials over the first and the second main rollers on rotation of the main rollers; and

first and second scraping blades respectively disposed close to the first and the second main rollers for scraping outer sides of the liquid
10 materials off the main rollers before the liquid materials stick to the leather.

2. A method for manufacturing mats, comprising the steps of:

(1) manufacturing first and second main rollers; the main rollers being formed with recess patterns on outer sides;

15 (2) preparing materials; first and second plastic materials being separately stirred and molten, and respectively held in front and rear containers;

(3) positioning a first leather; the first leather being positioned on a feeding mechanism, and guided by first subsidiary rollers, and being
20 passed and pressed between a first main roller and a first pressing roller;

(4) effecting rotation of the first main roller to make the first plastic material stick on the first main roller; a first material applying roller, which is dipped in the first molten plastic material and is in contact with

the first main roller, turning together with the first main roller to apply the first plastic material over a surface and into the recess patterns of the first main roller on rotation of the main roller; a first scraping blade, which is disposed close to the first main roller, scraping some of the first plastic material off the first main roller on rotation of the main roller;

(5) sticking the first plastic material on the first leather; a layer of first plastic material over the main roller sticking to one side of the first leather on rotation of the first main roller; first heating tubes, which are disposed in the first main roller, producing heat to make the first plastic material adhered to the first leather;

(6) cooling the plastic material and separating the first leather from the first main roller; first water pipes, which are disposed in the first main roller, supplying cooling water into the main roller for cooling the layer of first plastic material; then, the first leather being passed between the first main roller and a second subsidiary roller, and guided in a substantially opposite direction such that it is separated from the first main roller together with the layer of first plastic material;

(7) adhering a second plastic material to other side of the first leather; a second material applying roller, which is dipped in the second molten plastic material and is in contact with the second main roller, turning together with the second main roller to apply the second plastic material over a surface and into the recess patterns of the second main roller on rotation of the second main roller; a second scraping blade, which is

disposed close to the second main roller, scraping some of the second plastic material off the second main roller on rotation of the main roller; the first leather being passed and pressed between the second main roller and a second pressing roller for a layer of second plastic material to stick
5 to other side thereof on rotation of the second main roller; second heating tubes producing heat to make the second plastic material adhered to the first leather;

(8) cooling the second plastic material and separating the first leather from the second main roller; cooling water being supplied in the second
10 main roller by second water pipes so that the layer of second plastic material is cooled; the first leather being passed between the second main roller and a third subsidiary roller, and guided in a substantially opposite direction such that it is separated from the second main roller together with the layer of second plastic material;

15 (9) storing the first leather; the leather is wound around a reel; and

(10) cutting the first leather into mats; the leather with the first and the second plastic layers on both sides being cut into separate mats.

3. The method for manufacturing mats as claimed in claim 2 further comprising a step of sticking a second leather on said other side of the
20 first leather in case the first leather isn't thick enough; the second leather being supported on a second support, and passed between the second main roller and the second pressing roller together with the first leather to stick to said other side of the first leather.